

II. CLAIM AMENDMENTS

1. (Currently Amended) A method for controlling at least one micromechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second control signal , and

the micromechanical element is held on said active state with at least the first control signal, and

wherein the sum of the first control signal and the second control signal is fed to the micromechanical element with at least one control electrode, the at least one control electrode being at least partly covered by a dielectric layer to prevent a galvanic contact between said control electrode and the micromechanical element.

2. (Original) A method according to claim 1, characterized in that the active state is a pull-in state.

3. (Original) A method according to claim 1, characterized in that the second control signal is a short duration voltage pulse.

4. (Original) A method according to claim 1, characterized in that the second control signal is a short duration sinusoidal signal.

5. (Original) A method according to claim 1, characterized in that the second control signal is a short duration pulse train.

6. (Original) A method according to claim 1, characterized in that the second control signal is a frequency swept waveform.

7. (Original) A method according to claim 1, characterized in that the first control signal is a constant voltage signal.

8. (Cancelled)

9. (Previously Presented) A method according to claim 1, characterized in that the sum consists of signals with different amplitudes.

10. (Currently Amended) ~~A method according to claim 1, characterized in that the sum consists of signals with different frequencies.~~ A method for controlling at least one micromechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second control signal, said sum consisting of signals with different frequencies, and

the micromechanical element is held on said active state with at least the first control signal.

11. (Currently Amended) ~~A method according to claim 1, characterized in that the sum consists of signals with different duty eyeles.~~ A method for controlling at least one micromechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second signal, the sum consisting of signals with different duty cycles, and

the micromechanical element is held on said active state with at least the first control signal.

12. (Currently Amended) ~~A method according to claim 1, characterized in that the sum consists of signals with different pulse densities.~~ A method for controlling at least one micromechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second control signal, the sum consisting of signals with different pulse densities, and

the micromechanical element is held on said active state with at least the first control signal.

13. (Cancelled)

14. (Currently Amended) ~~A method according to claim 13, characterized in that the amplitude of the second control signal is~~

raised with a resonance circuit. A method for controlling at least one mechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second control signal, wherein the amplitude of the second control signal is raised with a resonance circuit higher than an amplitude of the first control signal, and

the micromechanical element is held on said active state with at least the first control signal.

15. (Original) A method according to claim 14, **characterized** in that a frequency of the second control signal is 0 - 6 % lower than an electrical resonance frequency of the resonance circuit.

16. (Currently Amended) ~~A method according to claim 1, characterized in that a harmonic frequency of the second control signal is essentially the same as the mechanical resonance of the micromechanical element.~~ A method for controlling at least one micromechanical element, wherein

the micromechanical element is set to an active state with a sum of a first control signal and a second control signal,

the micromechanical element is held on said active state with at least the first control signal, and

a harmonic frequency of the second control signal is essentially the same as a resonance frequency of the micromechanical element.

17. (Currently Amended) A method according to claim ~~±~~ 16, characterized in that a harmonic frequency of the second control signal is essentially the same as ~~the~~ an electrical resonance of the micromechanical element.

18. (Currently Amended) A method according to claim 16, characterized in that a harmonic frequency of the second control signal is essentially the same as a mechanical resonance of the micromechanical element. ~~An arrangement for controlling at least one micromechanical element (402), characterized in that the arrangement contains at least~~

~~means for generating at least a first control signal and a second control signal,~~

~~means for raising a voltage level of at least said second control signal,~~

~~means for feeding the sum of said first control signal and said second control signal with raised voltage level to the micromechanical element, the means for feeding the first control signal and the second control signal to the micromechanical element containing at least one control electrode, the at least one control electrode being at least partly covered by a dielectric layer to prevent a galvanic contact between the at least one control electrode and the micromechanical element.~~

19. (Currently Amended) An arrangement according to claim ~~18~~ 42, ~~characterized in that~~ wherein means for generating at least the

first control signal and the second control signal contain at least a voltage converter circuit.

20. (Currently Amended) An arrangement according to claim ~~18~~ 42, ~~characterized in that~~ wherein the arrangement contains at least

an inductor connected to a DC voltage source,

a micromechanical element with an intrinsic capacitance,

a diode for preventing discharging of said capacitor of said micromechanical element,

a first switching element for controlling a voltage between said inductor and said diode,

a second switching element (803) for resetting said charge of said capacitance (402) of said micromechanical element.

21. (Currently Amended) An arrangement according to claim ~~18~~ 42, ~~characterized in that~~ wherein means for raising a voltage level of at least said second control signal contain at least a resonance circuit.

22. (Original) An arrangement according to claim 21, **characterized** in that the resonance circuit consists of an inductor and a capacitance of the micromechanical element.

23. (Original) An arrangement according to claim 22, **characterized** in that the capacitance is intrinsic to the micromechanical element.

24. (Original) An arrangement according to claim 22, **characterized** in that the capacitance is external to the micromechanical element.

25. (Original) An arrangement according to claim 22, **characterized** in that the inductor and the micromechanical element are integrated on the same substrate.

26. (Original) An arrangement according to claim 25, **characterized** in that the substrate is a silicon wafer.

27. (Original) An arrangement according to claim 25, **characterized** in that the substrate is made of borosilicate glass.

28. (Original) An arrangement according to claim 25, **characterized** in that the substrate is made of quartz.

29. (Original) An arrangement according to claim 25, **characterized** in that the substrate is made of polymer.

30. (Original) An arrangement according to claim 22, characterized in that the inductor is a three dimensional solenoid.

31. (Original) An arrangement according to claim 22, characterized in that the inductor is a three dimensional toroid.

32. (Original) An arrangement according to claim 22, characterized in that the inductor has a high permittivity core.

33. (Original) An arrangement according to claim 22, characterized in that the inductor is a bulk component external to the micromechanical element.

34. (Previously Presented) An arrangement according to claim 21, characterized in that the resonance circuit contains at least,

an inductor connected to a DC voltage source,

a micromechanical element with an intrinsic capacitance,

a switching element to control for discharging said intrinsic capacitance of said micromechanical element.

35. (Original) An arrangement according to claim 21, characterized in that the resonance circuit is driven by an amplifier stage.

36. (Original) An arrangement according to claim 35, characterized in that the amplifier stage is controlled with a feedback signal from the resonance circuit.

37. (Currently Amended) An arrangement according to claim ~~18~~ 42, ~~characterized in that~~ wherein the means for feeding the first control signal and the second control signal with raised voltage level to the micromechanical element contain a summing element for summing said first control signal and said second control signal.

38. (Cancelled)

39. (Currently Amended) An arrangement according to claim ~~18~~ 42, ~~characterized in that~~ wherein means for feeding the first control signal and the second control signal to the micromechanical element contain at least two separate control electrodes for said first and said second control signals.

40. (Cancelled)

41. (Previously Presented) An arrangement for controlling at least one micromechanical element, wherein the arrangement comprises:

means for generating at least a first control signal and a second control signal, wherein the means for generating at

least the first control signal and the second control signal contain at least a voltage converter circuit;

means for raising a voltage level of at least said second control signal;

means for feeding the sum of said first control signal and said second control signal with raised voltage level to the micromechanical element;

an inductor connected to a DC voltage source;

a micromechanical element with an intrinsic capacitance;

a diode for preventing discharging of said capacitor of said micromechanical element;

a first switching element for controlling a voltage between said inductor and said diode; and

a second switching element (803) for resetting said charge of said capacitance (402) of said micromechanical element.

42. (Previously Presented) An arrangement for controlling at least one micromechanical element, wherein the arrangement comprises:

means for generating at least a first control signal and a second control signal;

means for raising a voltage level of at least the second control signal;

means for feeding the sum of the first control signal and the second control signal with raised voltage level to the micromechanical element; and wherein

means for feeding the sum of the first control signal and the second control signal to the micromechanical element contains at least one control electrode, wherein the at least one control electrode is at least partly covered by a dielectric layer to prevent a galvanic contact between said control electrodes and the micromechanical element.